



# MONTHLY NOTICES

OF THE

## ROYAL ASTRONOMICAL SOCIETY.

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Professor H. H. TURNER, D.Sc., F.R.S., PRESIDENT, in the Chair.

Percy Morris, Holmwood, Camborne Road, Sutton, Surrey, was balloted for and duly elected a Fellow of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended :—

Zia Uddin Ahmad, B.A., Isaac Newton Student in the University of Cambridge, Trinity College, Cambridge (proposed by E. T. Whittaker) ;

Daniel Buckney, 61 Strand, W.C. (proposed by W. H. M. Christie) ; and

Robert James Wallace, Yerkes Observatory, Williams Bay, Wis., U.S.A. (proposed by S. W. Burnham).

Eighty-five presents were announced as having been received since the last meeting, including, amongst others :—

Bonn Observatory, Veröffentlichungen : C. Mönnichmeyer, Beobachtungen der internationalen Polhöhensterne (presented by the Observatory) ; Cape Observatory Annals : Revision of the Cape Photographic Durchmusterung (presented by the Observatory) ; J. H. Schroeter, Beiträge zu den neuesten astronomischen Beobachtungen, 1788 (presented by Dr. Dreyer) ; Yerkes Observatory Publications, vol. 3 ; The Rumford Spectroheliograph

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(presented by the Observatory); Portrait of Bishop Brinkley (presented by Sir R. Ball); Portrait of Manuel Johnson (presented by Dr. Rambaut);

And, in addition to the above, a series of photographs presented by the Director of the Yerkes Observatory which had been shown at the annual meeting—viz. 11 transparencies from Professor Hale's spectroheliographs of the solar surface, and 39 paper prints from photographs of stellar spectra, the Sun, instruments, &c.

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*Note on the Instrumental Errors affecting Observations of the Moon.* By H. H. Turner, D.Sc., F.R.S., Savilian Professor.

1. In the November number of the *Notices* I described a method of photographing the Moon among the stars as a way of obtaining its place which seemed to be freer than the methods now in use from certain systematic errors, and the following sentence occurs in the first paragraph :—

It was to obtain observations of the Moon in the first and last quarters that Airy set up the altazimuth at Greenwich in 1847; and unfortunately the instrument did not satisfactorily solve the problem.

At the time of writing these words it occurred to me that the evidence for or against the value of the altazimuth observations had never, so far as I know, been definitely published. Disparaging criticisms of a general nature have been made more than once, and were at any rate so familiar to me that the above sentence suggested itself naturally. But at the same time, for my own satisfaction, it seemed desirable to make some investigation of the behaviour of the instrument; and as an involuntary pause in our work for the Astrographic Catalogue set a computer free, an inquiry was started.

2. Soon afterwards I learnt that Mr. Cowell was at work on the Greenwich lunar observations, and it seemed probable that we were merely duplicating his work. But in reply to a definite question I learnt that he was not discussing the altazimuth observations at all—perhaps another illustration of the general disrepute into which they have fallen. Accordingly the inquiry was not interrupted; and it now seems fortunate that it was started, for, unless I am mistaken, the results indicate that the instrumental errors of the transit circle observations may be much larger than Mr. Cowell appears to have allowed for, and are liable to modify some of the deductions which he has extracted with such skill from the *Greenwich Observations*. In view of the fact that he is contemplating further work of the same kind, it seems important to draw attention at once to the possibilities.